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DEVELOP NEW PRESSES, PLANING MACHINES, BORING MACHINES IN THE USSR

IMPROVED DESIGNS SAVE METAL -- Moscow, Trud, 16 May 53

The Chimkent Presses and Automatics Plant has completed a group of new machines, Model A-164, for producing bolts at the rate of 70 per minute. Waste metal per hundred bolts produced on the new automatic is more than 28 kilograms less than when the bolts are turned on a lathe.

The FA-127 friction screw press has been modernized with a considerable saving in metal. For example, in the original press, the shock absorber weighed 600 kilograms. In the modernized version, only 20 kilograms of metal are now going into this unit.

The plant expects to save 300 tons of metal in 1953.

PRODUCE NEW PLANING MACHINES -- Minsk, Sovetskaya Belorussiya, 14 Mar 53

G. Plashey and L. Matusevich, engineer-designers of the Minsk Machine Tool Building Plant imeni Voroshilov, have designed a high-production planing machine for processing parts up to 10 tons in weight. The planing machines have been put into series production and are being furnished to the machine building industry.

Recently, the first powerful edge-planing machines were released from one of the plant's shops. They are intended for machining steel sheet from 6 to 12 meters long, from which cisterns, tanks, and other reservoirs will be fabricated. These machine tools are also widely used in machining structural metal. Originally, it was calculated that the edge-planing machine would weigh 50 tons. Yu. Tatarov, engineer, under the supervision of N. A. Klimov, chief designer, and with the cooperation of foremen and Stakhanovites, redesigned the machine tool, as a result of which its weight was cut almost in half, and its operating qualities were improved considerably. The design of the new machine received a high rating after testing.

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NEW MACHINE TOOL MODEL NUMBER REPORTED -- Moscow, Moskovskiy Komsomolets,
8 Apr 53

Recent achievements in Soviet machine tool building include a planomilling machine, Model 6672, which is 18.5 meters long and weighs 140 tons. -- A. Ye. Prokopovich, deputy director, Experimental Scientific Research Institute of Metal-Cutting Machine Tools

MACHINE PARTS IN 10 HOURS INSTEAD OF 100 -- Tallin, Sovetskaya Estoniya,
7 Apr 53

The Leningrad Machine Tool Building Plant imeni Sverdlov has completed the assembly of a special turning machine for turbine building. The machining of parts on the new machine will take only 10 hours, whereas these operations now take 100 hours. The machine is equipped with push-button control and has automatic shifting of speeds. It has 26 motors and is controlled from two panels. It is intended for machining hydroturbine blades.

SAVE METAL; PERFECT NEW MACHINE TOOLS -- Leningradskaya Pravda, 7 Apr 53

The introduction of new, progressive, technological processes at the Leningrad Plant imeni Sverdlov has made it possible to decrease the consumption of metal, to decrease rapidly the labor consumption in the manufacture of machine tools, and to increase considerably labor productivity. For example, in 1949, 16,565 kilograms of cast iron and steel were used in the manufacture of Model 262-G universal boring machine. In 1953, the consumption of these materials has been decreased by more than one ton. In this period, the time for manufacturing the Model 262-G has been cut in half.

Among the new machine tools perfected at the Plant imeni Sverdlov in 1952 is the Model 265 heavy universal boring machine. /See U-2902, a translation of an article by B. V. Krayushkin, published in Stanki i Instrument, No 4, 1941, which states that the Model 265 boring machine has been recognized as being imperfect and that during 1941, it will be withdrawn from production and replaced by Model 265-V./

Among the 18 types of new machine tools which the plant must perfect in 1953 is the Model 2630 light universal boring machine for machining large parts. -- I. Verin, chief engineer, Leningrad Plant imeni Sverdlov

MOSCOW PLANT BUILDS ITS FIRST HEAVY MACHINE TOOL -- Moscow, Moskovskaya Pravda, 8 May 53

Workers at the Moscow Machine Tool Building Plant imeni Ordzhonikidze have been charged with mastering and setting up series production of Model 265-V heavy horizontal boring machines. /See preceding item/ which states this model was perfected in 1949. They have already built, tested, and released the first machine of this type.

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This machine tool is intended for machining large and heavy parts for reduction units, turbines, rolling mills, and other large machines. The machine can bore holes up to 1.2 meters in diameter and 1,350 millimeters deep, mill flat surfaces approximately 10 square meters in size, turn flanges, cut any metric or inch thread, machine holes which must be accurately interspaced (jig boring), and drill, counterbore, and ream holes of various diameters.

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The dimensions of the machine tool are as follows: height, 6 meters; length of bed, 10 meters; width, 8 meters; floor space, 70 square meters; and weight, 63 tons.

To put its mechanisms in operation, eight electric motors of different power have been installed in the machine. The spindle has 16 speeds (from 3.3 to 600 revolutions per minute) and 16 feeds.

Many production difficulties were encountered in assembling this machine tool, since this was the Plant imeni Ordzhonikidze's first experience in dealing with such a heavy machine tool. In many cases, the workers had to improvise machining methods. For example, the plant does not have a machine tool of sufficient size to machine a 10-meter-long bed. Although the heavy machine tool is good, accurate, and reliable, certain shortcomings in its design must be noted, especially since the plant must produce a whole series of them in 1953.

The basic shortcoming in the design (developed, by the way, not by Moscow machine tool builders but by Novosibirsk machine tool builders) is that its operation has been made automatic by means of mechanical transmissions rather than by hydraulic or electrical means.

The use of hydraulic and electrical apparatus would have made it possible to automatize the complex work cycle of the machine tool without complicating the mechanical part. In addition, since hydraulic and electric apparatus are manufactured at specialized plants, their utilization would have considerably simplified and eased production at the machine tool plant.

The machine tool builders have had experience in using hydraulics in building a series of good Model 1731 hydraulic multitool semiautomatics. For this reason, it would be wise to reconsider the design of the Model 265-V in this respect.

In addition, it would be a good idea to think over the possibility of increasing the power of the main motor because of the need for using new methods of machining metal; that is, in machining with increased feeds, depth of cut, and cutting speeds.

Petrozavodsk, Leninskoye Znaniya, 12 May 53

The Moscow Machine Tool Plant imeni S. Ordzhonikidze has manufactured its first heavy horizontal boring machine. The machine can perform a number of diversified operations such as milling, drilling, and boring.

RELEASE NEW HORIZONTAL BORING MACHINE -- Moscow, Pravda, 7 May 53

The Novosibirsk Tyazhstankogidropress Plant imeni Yefremov has released a new horizontal boring machine for machining turbine parts and other products.

The new machine tool can machine parts 10 tons in weight. It occupies a floor area of 130 square meters and is as high as a two-story home. Ten flat cars are needed to transport it.

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